

REMARKS

Applicant wishes to thank the Examiner for reviewing the present application.

Claim Amendments

Claim 1 is amended replacing “transparent to the” with “hidden from said” consistent with the terminology used on page 6 of the specification. Claim 1 is also amended to clarify that the interception of the datagrams occurs in the data link layer and that reconstructed datagrams are prepared and provided back to the data link layer. Various other amendments have been made for readability.

Claims 5 and 10 are amended in a manner similar to claim 1.

Claims 4 and 6 in view of amendments to claims 1 and 5.

Claim 11 is cancelled and claim 12 amended to depend on claim 1.

No new subject matter is believed to have been added by way of these amendments.

Commentary regarding Amendments

Independent claims 1, 5 and 10 have been amended to clarify several features recited in the claims. Firstly, the amended claims specify that the interception of datagrams occurs in the data link layer. When the datagrams are intercepted in the data link layer, any processing, e.g. IPSec processing, can be performed without the network layer being aware of such processing, and is thus hidden. The datagrams are intercepted in the data link layer as they are outbound to the network layer and similarly are intercepted in the data link layer as they are inbound from the network layer. When the datagrams are intercepted, they are decapsulated, processed if necessary, and reconstructed so that they are in the same form such that the data link layer can continue to handle the datagrams as if nothing occurred.

For example, a PPP datagram at the data link layer encapsulates an IP packet. The PPP datagram can be intercepted at the data link layer as it travels outbound to the network layer. Once intercepted the datagram can then be decapsulated to obtain the IP packet, the IP packet can then be processed as if it were at the network layer, the packet can then be reconstructed back into a PPP datagram as before, and the data link layer will further process the packet to be sent to the network layer, i.e. as an IP packet. This enables processing that would normally be

done at the network layer, but infeasible to do so (see page 2, lines 8-10), to be done at the data link layer, without the network layer or data link layer being aware.

Applicant believes that the above-described amendments serve to clarify the claims and clearly distinguish them over the Ellington reference.

Claim Rejections

Claims 1-15 have been rejected as being anticipated by U.S. Patent No. 6,708,218 to Ellington, Jr. et al. (Ellington). Applicant believes that the amended claims distinguish over Ellington as follows.

Ellington teaches hardware based IPSec performance enhancement by processing IPSec and non-IPSec packets in parallel. As shown in Figure 3, an IPSec function is placed below the network layer but above the data link layer. The IPSec function examines packets and creates a queue for IPSec processing while allowing other non-IPSec packets to proceed to normal packet processing. The parallel processing aims to increase the efficiency of IPSec processing.

It is clear from Figure 3 that Ellington does not intercept packets in the data link layer but above the data link layer. Therefore, although the packets are intercepted below the network layer, the processing is not hidden as is recited in the claims of the present application. In fact, since the IPSec function is above the data link layer, it will process network layer ready packets and not data link layer ready packets.

As noted above, Ellington is concerned with dividing duties for IPSec and non-IPSec packets and is not concerned with hiding IPSec processing as the claimed invention is. Ellington does not decapsulate, process and then reconstruct so that normal processing can continue as though the processing did not occur. Ellington is entirely silent as to intercepting in the data link layer in order to process the packets in the manner recited in claim 1. Ellington clearly processes datagrams above the data link layer and thus cannot achieve the same result as the claimed invention. Ellington would process packets after they are prepared for the network layer, e.g. IP packets rather than PPP packets.


It can therefore be seen that Ellington does not teach every element of amended claim 1 and, as such cannot anticipate. Similar arguments apply to claims 5 and 10. Claims 2-4, 6-9 and 12-15 being ultimately dependent on one of claims 1, 5 and 10 are also believed to distinguish over Ellington for at least that reason.

Summary

In view of the foregoing, Applicant respectfully submits that all pending claims, namely claims 1-10 and 12-15 distinguish over the Ellington reference and are in condition for allowance.

Applicant requests early reconsideration and allowance of the present application.

Respectfully submitted,



Brett J. Slaney
Agent for Applicant
Registration No. 58,772

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BLAKE, CASSELS & GRAYDON LLP
Suite 2800, P.O. Box 25
199 Bay Street, Commerce Court West
Toronto, Ontario M5L 1A9
CANADA

Tel: 416-863-2518
BSL/